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ABSTRACT

This paper discusses the transfer ready concept and includes data demonstrating the accuracy and efficiency of the new transfer ready model, in contrast to the current Student-Right-to-Know model. It explains the process of calculating the percentage rates of transfer directed students (those enrolled in both transfer English and math in their freshman year), and transfer ready students (those completing at least 56 transfer units within 4 years, including English and math, and earning a GPA of 2.0 or better). A table containing American River College (California) transfer ready data illustrates the high consistency over time of transfer directed and transfer ready percentages. An additional table demonstrates the consistency of the new model and the high overlap between the two models. The new transfer ready model would allow statewide use by including units earned from other district community colleges, eliminating specific course numbering, and simplifying the final requirement to 56 transfer units with a GPA of at least 2.0. Though difficulties for systemwide application exist, such as inadequate computer capacity and complications due to varied course numbering, in comparison with the current model, the new transfer ready model is superior in accuracy and more feasible for statewide application. (YKH)

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Streamlining the Transfer Ready Model, and How Data Outcomes Compare to Requirements by the Student Right To Know Legislation.

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Abstract

The paper covers a brief history of the transfer ready concept and includes data to support the contention that transfer directed and transfer ready rates are stable from one year to the next. A proposal for a slight adjustment in analysis is also recommended that would make the model easier to run for all community colleges from a central information system (MIS). The transfer directed rate for American River College using the new approach is 23% while the transfer ready rate is 53%. Results such as these are contrasted with outcomes for the transfer ready rate when using an analysis as suggested in the guidelines from the Student-Right-To-Know legislation. In this situation the base is all freshmen who indicated a goal of transfer and the resulting transfer ready rate is only 16%.

Streamlining the Transfer Ready Model, and How Data Outcomes Compare to Requirements by the Student Right To Know Legislation. [1]

The evolution of the transfer ready model to the period just preceding this paper may be found in other works. For the interested reader, see Rasor & Barr (1995a; 1995b) and other references at the end of this paper. Only a short overview is presented here. There are many difficulties with tracking students who transfer from a California community college to a university. Data are simply incomplete. Often universities provide only raw counts of students by semester of first enrollment. Without some type of identification for each student, community college researchers do not know who the student transfers were, when they left the community college, or what courses they took before entering the university. Furthermore, no complete counts are provided for students who transferred to private or out-of-state universities. For these and other reasons, the transfer ready model was developed. Instead of trying to locate every conceivable student who transferred, the model called for the following: (1) Identify all new freshmen students without prior college units who were admitted to a community college and earned at least one grade notation their first fall semester. (2) Of those new freshmen, determine the number who enrolled in the *beginning* transfer level English composition (writing) course and in *any* transfer level math or statistics course (which meets transfer general education requirements for California State University. Students who enrolled in both transfer English and math are considered as transfer directed, that is, show evidence of transfer oriented behavior. They were allowed four years from admission for completing their enrollment in English and math. Converting to a percentage indicates the relative frequency of all freshmen who became transfer directed within four years. We have also found that identification as being transfer directed is a much better predictor of completing transfer ready requirements or having actually transferred than merely a student's stated goal of transfer (Rasor & Barr, 1995a; 1995b).

Of those students who fit the definition of transfer directed, another count is determined for those who completed 56 or more transfer units, earned a GPA of 2.0+ in transfer work, and completed the transfer English and transfer math courses — all within four years of admission. The transfer directed and transfer ready rates were then computed as:

$$\textbf{Transfer Directed Rate} = \frac{\textbf{Count of Transfer Directed}}{\textbf{Count of all Freshmen}} \times 100$$

$$\textbf{Transfer Ready Rate} = \frac{\textbf{Count of Transfer Ready}}{\textbf{Count of Transfer Directed}} \times 100$$

In Table 1 are American River College transfer ready data based upon six fall semesters. Units earned from other colleges within our district were allowed. For example, if a freshman student from American River College completed his English 1A (our beginning transfer level English writing course) at Sacramento City College, those units would be included within the model. To help explain the table contents, in the fall semester of 1988, American River College had 3,580 new freshmen without prior units and who earned at least one grade notation at the end of the first semester. Of the 3,580, 21.5% enrolled in the transfer level English composition course and in a transfer level mathematics (or statistics) course within four years. The 21.5% group are the transfer directed, that is, show evidence of intent to transfer by virtue of their enrollment in transfer English and transfer math. Of the transfer directed group, 50.4% completed their transfer requirements for the California State University system in that they earned 56+ transfer units with a 2.00+ GPA, as well as having successfully completed their English and math courses as required on the California State University general education pattern. Summing for all years, these rates are 23.1% for

[1] We want to thank Dr. Judy Beachler (Los Rios CCD) and Sue Lorimer (American River College) for their reviews of this manuscript.

transfer directed and 50.1% for transfer ready. It is always important to examine *both rates* because an institution could have a high transfer ready rate, but it may be based upon a relatively small number of students who became transfer directed out of the population of all freshmen.

Table 1. American River College Transfer Ready Data Based Upon Original Model.[1]

Fall Years.	N	Transfer Directed (%)	Transfer Ready Rate (%)
1988	3,580	21.5	50.4
1989	3,465	23.3	51.6
1990	3,455	23.1	48.3
1991	3,232	25.5	49.3
1992	3,112	23.0	49.9
1993	3,085	22.6	51.3
Totals	19,929	23.1	50.1
Standard Deviation		1.2	1.1

[1] These totals reflect some units earned from other colleges within the Los Rios District. For ARC only, the transfer directed rate would be reduced by 0.9 %, while the transfer ready rate would be reduced by 1.3%.

The primary purpose of showing Table 1 is to demonstrate the high consistency over time for both the transfer directed percentages and the transfer ready rates. The standard deviation is only about 1%. This finding clearly demonstrates that the original transfer ready model is highly reliable, assuming that there are no unusual actions or events that happen which would directly affect transfer oriented behavior in students, e.g., a sudden increase in tuition or implementing a community college program designed to increase transfer.

Problems With Wide Application

While the original transfer ready model seems sound enough, there are difficulties in applying it on a system-wide basis, that is, across all community colleges within the state. First of all, some college researchers in California experience difficulty accessing data or simply do not have the necessary computer capacity on their desk models to handle a download of millions of student records. Given this current state of affairs, transfer ready rates could not be generated for every community college unless it is done by a central agency such as the Management Information System (MIS) within the State Chancellor's Office for California Community Colleges.

Second, in order to be considered as transfer directed, a student must enroll in a specific transfer level English course and a transfer level math or statistics course. Yet each college may have relatively unique course numbering. What is English 1A at one community college may be English 25A at another college. It would be very difficult for any central data processing system to keep all such course numbers straight for every single community college. Any course numbering changes affecting the transfer ready model would also have to be frequently submitted. One can easily anticipate reluctance to implement such a model given

all the course permutations. Thus, a modified transfer ready model needed to be developed that would be easier to run for all community colleges. Finally, those students who take the first level English or math course elsewhere but take more advanced courses at the "home" college would not be included in the original model.

The New Transfer Ready Model

Our goal in developing a new model was to maintain the integrity of the original model, delete highly redundant measures, and simplify it for statewide use. The first thing we did was to include units earned from other nearby sister colleges within our community college district, i.e., Los Rios. This meant that a student could meet the requirements for becoming transfer ready by taking some courses outside our college. If the model becomes implemented by the State Chancellor's Office for California Community Colleges, transfer units taken at *any* California public community college should be counted toward meeting the requirements of becoming transfer ready. This would certainly be a positive factor. Next, we eliminated any specific course numbering that defined the transfer directed cohort. Instead, the transfer directed became those students who enrolled in *any* transfer level English course and in *any* transfer level math or statistics course within four years of admission to the college. Removing specific course numbers (yet still indicating transfer level) should make the model much easier to apply system-wide. We also found that nearly all students who fit this new operational definition also met the original definition for being transfer directed. Following that, we changed the ending requirements from 56+ transfer units with a 2.0+ GPA, and successful completion of English composition and math, to simply 56+ transfer units with a 2.0+ GPA. Deleted were completion of English and math (or statistics). The logic was simple: We doubted that many students would enroll in a transfer level English, transfer math, and complete 56+ transfer units with a 2.0+ GPA, would not also complete English and math. To summarize, the new transfer ready model looks like this:

Beginning Cohort: All new, fall semester freshmen students with at least one grade of record.

Transfer Directed: All freshmen who enrolled in a transfer level English course and a transfer level math or statistics course within four years of admission. A percentage of all freshmen is also determined.

Transfer Ready: Those transfer directed students who completed 56+ transfer units with a 2.0+ GPA within four years of admission.

$$\textbf{Transfer Directed Rate} = \frac{\textbf{Count of Transfer Directed}}{\textbf{Count of all Freshmen}} \times 100$$

$$\textbf{Transfer Ready Rate} = \frac{\textbf{Count of Transfer Ready}}{\textbf{Count of Transfer Directed}} \times 100$$

Table 2 contains American River College data using the new approach which can be directly compared to data from the original model found in Table 1. In spite of the changes, the new model also shows great stability over time (note the standard deviation). Two observations need to be pointed out in comparing the totals based upon 19,929 freshmen: In the original model, 23.1% of the freshmen were transfer directed. With the new model, the value is 22.9%. The transfer ready rate in the original model was 50.1% and in the new model it is 52.8%, a gain of 2.7%. This indicates that more students met the new transfer ready definition when some of the original requirements were eliminated. We also compared data from our sister colleges using only fall 1990 and fall 1991 freshmen. One college gained 3.5% while another gained 7.5% in transfer ready rates when comparing the original model with the proposed new one. It seems safe to conclude, that with the new model, the transfer ready rate will likely increase over that computed with the

original model. We are not particularly troubled by this fact because the raw counts of students in both models are not large, and the models undercount transfer students anyway, (e.g., some students actually transfer to a university short of completing the transfer ready requirements by being qualified to enroll directly from high school, or they may transfer to a private or out-of-state university which has different requirements for transferring from a community college).

Table 2. American River College Data Based Upon New Transfer Ready Model.[1]

Fall Years	N	Transfer Directed (%)	Transfer Ready Rate (%)
1988	3,580	21.1	54.2
1989	3,465	22.8	54.4
1990	3,455	22.5	52.0
1991	3,232	25.3	51.4
1992	3,112	22.8	51.8
1993	3,085	23.0	52.7
Totals	19,929	22.9	52.8
Standard Deviation		1.2	1.2

[1] These totals include some district units (see footnote Table 1). The values also reflect eliminating two ARC courses which were in the original model.

Degree of Overlap Within the Models

We also examined the overlap between the two models for three colleges using fall 1990 plus fall 1991 data. All freshmen in the original model fell into the new model because it is less restrictive. That is, 100% of the transfer directed and 100% of the transfer ready students in the original model where also in those same categories in the new model. The pertinent question is, what percent of students within those categories of the new model were also in the same categories of the original model? It varied slightly from college to college, but the overall rates for transfer directed was 97%, and the rate for transfer ready was 87%. Thus, a very high percentage of students who meet the new transfer directed and transfer ready definitions were also in those same categories of the original model. This finding gives us some indication of the internal validity of the new model.

How Student Right To Know Legislation Relates to the New Transfer Ready Model

Somewhat simplified, the Student Right To Know legislation (SRTK) requires the following: (1) Isolate for a given fall semester, all new freshmen students, without prior college units, who earned at least one grade notation at the conclusion of the first semester, and who indicated that they were pursuing a goal of an AA/AS degree, a certificate, or planning to transfer to a university. (2) Within a time frame of 150% of the "normal time" to complete a program of study, determine how many of the freshmen cohort completed an AA/AS degree, certificate, or transferred (completion of transfer ready requirements may be substituted in place of evidence of actual transfer to a university). The operational definition for "normal time" is as follows: If a student is full-time, (12+ unit load the first semester), the time frame allowed is three years. If a student is part-time, (0.5 to 11.9 unit load the first semester), the allowed time frame is six

years. Note: It is our understanding that the Integrated Post-Secondary Data System's Graduation Rate Survey (IPEDS-GRS), which is the vehicle for reporting SRTK data, will be requesting data for both three and six-year windows of opportunity on everyone irrespective of unit load. (3) Extract an unduplicated count of the freshmen cohort who completed one of these goals (degree, certificate, or transfer ready). (4) Divide the count of "goal completers" by the initial freshmen group and multiply times 100. This will yield the goal completion rate (percentage) for those freshmen students.

In our view, the SRTK may appear to make sense but there are three problems that concern us. First, the entire approach relies upon what a student indicates is his goal. We have found that goals are not very accurate predictors of student behavior in academic settings, (Rasor & Barr 1995a, 1995b). Second, the determination of full-time versus part-time as determined by the first semester load at first census seems unhelpful. Students cross over from full-time to part-time during a semester and certainly do so from one semester to another. It also seems odd to allow a part-time student six years to earn either a 15 or 30-unit certificate or to complete a 60 unit program. It makes more sense to settle upon one window of opportunity, e.g., four or five years. Third, allowing only three years for so called "full-time" students is not lengthy enough. The full-timers often become part-timers at a later date and may take much more than three years to complete either degree or transfer requirements.

In spite of our criticisms of SRTK, it is the law and the rates will be reported. Then perhaps community colleges should also report supplemental rates based upon different models. In order to directly compare SRTK with the new transfer ready model, only the transfer component was considered, and we had to artificially divide the freshmen groups into full-time or part-time with accompanying SRTK windows of opportunity (three or six years).

Table 3 includes data from the fall semester of 1991 that will set the stage for later comparisons, (i.e., Table 4). This particular semester was chosen because it is typical of other fall semesters, and it allows extending the time span to complete a program out to six full academic years, (e.g., summer 1997). Data in the first column of Table 3 show the outcome from the original transfer ready model.

Table 3. Comparing Three Variations of the Transfer Ready Model with the Original Model Using Fall 1991 ARC Data.

	Original TR Model	Proposed New TR Model	Load Breakout New TR Model		Load Breakout New TR Model		Mixed Load New TR Model	
			FT	PT	FT	PT	FT	PT
Sample Size	3,232	3,232	1,174	2,058	1,174	2,058	1,174	2,058
Years Allowed	4	4	3	3	6	6	3	6
Transfer Directed	25.5%	25.3%	44.6%	11.5%	48.0%	14.1%	44.6%	14.1%
Transfer Ready Rate	49.3%	51.4%	51.3%	29.1%	60.1%	46.7%	51.3%	46.7%
Transfer Ready Rate (Combined Loads)	**49.3%**	**51.4%**	**44.4%**		**55.6%**		**49.7%**	

The transfer directed is 25.5% of all freshmen while the transfer ready rate is 49.3%. In the second column are data reflecting our proposed new model. Here the transfer directed rate is 25.3%, and the transfer ready rate is increased slightly to 51.4%. In both of these examples, four years were allowed to complete the requirements. In the next two columns are the same data but with two modifications: The time frame is now

three years and the cohort is divided into full-time and part-time. Here the transfer ready rates are 51.3% and 29.1% respectively. When student load is ignored (combined loads), the overall transfer ready rate is 44.4%. In the next two columns, the time span is extended to six years, and the transfer ready rates for full-time and part-time are 60.1% and 46.7% with a combined rate of 55.6%. Finally, the last two columns of Table 3 show a mixed window of opportunity for goal completion, three years for full-time students and six years for part-time students. The combined transfer ready rate in this instance is 49.7%. The summarized findings from Table 3 are: Both the transfer directed and transfer ready rates increase with greater spans of opportunity to complete the requirements. Furthermore, full-time students show higher rates than part-time students. Finally, the gap between the transfer ready rates of full-time versus part-time students never becomes equal, but it does become smaller as greater time spans are allowed for part-time students.

In Table 4 are comparison data showing the SRTK model. In the first two columns note that 94% of all full-time freshmen (fall 1991) indicated a goal of "transfer." For part-time students, the rate is 76.7%. This means that the overwhelming majority of our students either believe or want others to believe that they are planning to transfer to a university. Yet the transfer ready rates for three years would suggest that they do not behave as though they are transfer bound, e.g., the combined transfer ready rate is only 13.5%. In the next two columns are rates for six-year periods of time. Here the combined transfer ready rate is 18.9%. In the third two-column set, is a mixed period of opportunity. Yet only 26.0% of full-time and 9.6% of part-time (with 16.3% combined) complete transfer ready requirements. In the remaining two-column set (any goal), we simply ignored what goal a student had indicated and proceeded as before with a mixed window of opportunity. The corresponding transfer ready rates only decreased by approximately 2% from those when we restricted the cohort to only those students indicating a goal of transfer. This indicates that having the information about a goal of transfer is not very useful as it boosts the rate only by about 2%.

Table 4. Analysis of the Student Right To Know (Transfer Goal) Using Fall 1991 ARC Data.

	SRTK Goal = Transfer		SRTK Goal = Transfer		SRTK Goal = Transfer Mixed Load		All Freshmen Any Goal Mixed Load	
	FT	PT	FT	PT	FT	PT	FT	PT
Sample Size	1,174	2,058	1,174	2,058	1,174	2,058	1,174	2,058
Years Allowed	3	3	6	6	3	6	3	6
Transfer Directed	94.0%	76.7%	94.0%	76.7%	94.0%	76.7%	100.0%	100.0%
Transfer Ready Rate	26.0%	4.7%	32.4%	9.6%	26.0%	9.6%	25.4%	7.8%
Transfer Ready Rate (Combined Loads)	**13.5%**		**18.9%**		**16.3%**		**14.2%**	

Comparing the Results of Table 3 With Table 4

To simplifying matters, temporarily ignore the full-time and part-time distinction. The approach of the proposed new model has combined transfer ready rates for three, four, and six years of opportunity as 44.4%, 51.4%, and 55.6%. The SRTK approach has combined ready rates of 13.5% and 18.9% as per three and six years of opportunity.

We believe our analysis has shown that the SRTK component on transfer will be misleading to the public and that something else must also be reported. We also believe that the new transfer ready model could be that "something else" and that it can be easily adopted by the State Chancellor's Office for computing transfer directed and transfer ready rates for all community colleges in the state.

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